

METHOD AND APPARATUS FOR SENSOR NETWORK ROUTING

ABSTRACT

Sensor network routing uses distance information of sensors relative to a collector node, optionally along with non-unique key information, to route broadcasts from addressless sensors to a selected addressless collector. Distance calculation messages (DCMs) are used to set distance values on sensors relative to collectors. The distance values enable messages to propagate toward collectors to reduce the number of broadcasts. Self-assigned key information may be added to DCMs propagating in the network to enable routes to be determined through the network without assigning addresses to the participants. By storing the key information associated with the route, and causing sensors to only rebroadcast a message if the message contains a matching key at the matching distance position, broadcast paths may be created on the network. Optionally, diverse collectors and paths may be selected on the network by exchanging traffic condition indications and preferentially selecting paths with better traffic conditions.